



420326

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5

77 W. JACKSON BLVD

CHICAGO, IL 60604

MEMORANDUM**DATE:** 10 JAN 2012**SUBJECT:** Request for Approval and Funding for a Time-Critical Removal Action at the Soper Avenue Groundwater Site, Rockford, Winnebago County, Illinois (Site ID #C595)**FROM:** Brad Benning, On-Scene Coordinator
Emergency Response Branch - Section 3

A handwritten signature in black ink, appearing to read "Brad Benning", is written over the typed name and title.

THRU: Charles Gebien, Acting Chief
Emergency Response Branch 2**TO:** Richard C. Karl, Director
Superfund Division**I. PURPOSE**

The purpose of this memorandum is to confirm verbal approval for emergency expenditure of \$2,500 by the Chief of the Emergency Response Branch 2 on October 19, 2011, and to request and document your approval to expend up to an additional \$201,588 for a total of \$204,088, in order to mitigate threats to public health and the environment at the Soper Avenue Groundwater Site (SAG Site), in Rockford, Winnebago County, Illinois. The actions proposed herein will mitigate Site conditions by providing temporary bottled water to immediately replace drinking water from on-site residential drinking water wells, and later extending the Rockford public water system to homes that are within the benzene contaminated groundwater plume. The SAG Site is located in an unincorporated area in the northwest portion of Rockford. Benzene has been detected in water samples collected from residential drinking water wells at a maximum concentration of 1,300 micrograms per liter ($\mu\text{g/L}$) which exceeds EPA's Removal Action Level (RAL) of 39 $\mu\text{g/L}$ and the Maximum Contaminant Level (MCL) of 5 $\mu\text{g/L}$. The Winnebago County and Illinois Public Health Agencies have determined that benzene detected in the drinking water wells above the MCL poses a public health hazard to water users. Due to public health threats at the SAG Site, this removal action is considered time-critical.

There are no nationally significant or precedent-setting issues associated with the SAG Site. The SAG Site is not on the National Priorities List (NPL).

The Action Memorandum would serve as approval for expenditures by EPA, as the lead technical agency, to take actions described herein to abate the imminent and substantial endangerment posed by hazardous substances at the Site. The proposed removal of hazardous substances would be taken pursuant to Section 104(a)(1) of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), 42 U.S.C. § 9604(a)(1), and 40 C.F.R. § 300.415 of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP),

II. SITE CONDITIONS AND BACKGROUND

CERCLIS ID: ILN000510656

State ID: LPC# 2012085009

Category: Time-Critical Removal

A. Site Description

1. Removal site evaluation

The EPA utilized drinking water results provided by Winnebago County Health Department (WCHD) and the Illinois Department of Public Health. Within the Area of Concern (AOC), 17 homes obtain drinking water from private wells that are typically less than 100 feet in depth. Currently, four homes exceed the MCL for benzene of 5 µg/L. Additional homes within the AOC have levels below the MCL and others have experienced odor problems. Homes that have not been impacted to date are likely to experience water issues based on their proximity to the benzene plume.

The Illinois EPA is currently investigating the groundwater problem to identify a possible source.

2. Physical location

The AOC is located on the northwest side of Rockford, Winnebago County, Illinois. The coordinates for the site are Latitude: 42.2882979 and Longitude: -89.1241901. After the initial notification to the Winnebago Health Department concerning odors in private wells, the County held an informational meeting with the Illinois Department of Public Health (IDPH) for residents to gather information on contamination and sign up for testing. Based on sampling results, the scope of the area has been limited to private wells in the area of Johnston Avenue to the west; Alliance Avenue to the east; Auburn Street to the south; and Parkside Avenue to the north (Attachment 4).

The area surrounding the SAG Site was screened for Environmental Justice (EJ) concerns using Region 5's EJ Assist Tool (which applies the interim version of the national EJ Strategic Enforcement Assessment Tool (EJSEAT)). Census tracts with a score of 1, 2, or 3 are considered to be high-priority potential EJ areas of concern according to EPA Region 5. The SAG Site is in a census tract with a score of 7. Therefore, Region 5 does not consider this to be a high-priority

potential EJ area of concern. Please refer to the attached EJ analysis for additional information (Attachment 5).

3. Site characteristics

The AOC consists of a residential neighborhood of 29 small single family homes located on Soper, Alliance Avenues and Auburn Streets. Approximately half of the residents are occupied by owners and the rest are rental homes. Of the 29 homes, 17 rely on private wells for their drinking water. Wells in the area are typically less than 100 feet deep.

B. Other Actions to Date

1. Previous actions

There have been no private or government response actions undertaken at the Site.

2. Current actions

On October 27, 2011, EPA made arrangements to supply commercial water dispensers to four homes that exceeded the MCL for benzene, and two homes that experienced significant odor issues. The IDPH data is generally described in Table 1 below.

TABLE 1- Residential Well Water Sample Results

Sample Location	Date	Sampled By	Benzene (ppb)	Benzene MCL (ppb)
Soper Ave.	June 28, 2011	IDPH	1,300	5
Soper Ave.	Aug. 11, 2011	IDPH	390	5
Soper Ave.	Sep. 14, 2011	IDPH	960	5
Soper Ave.	June 28, 2011	IDPH	970	5
Soper Ave.	Sep. 14, 2011	IDPH	1,300	5
Soper Ave.	Aug. 4, 2011	IDPH	250	5
Soper Ave.	Sep. 14, 2011	IDPH	29	5
Soper Ave.	Sep. 14, 2011	IDPH	37	5
Soper/Alliance Ave.	Strong Odor			

State and Local Authorities' Roles

1. State and local actions to date

The WCHD and the IDPH worked together to collect samples from private wells in the area on three occasions during June, August and September of 2011, after being informed of fuel-like odors from private wells.

On June 28, 2011, in response to resident's complaint of an odor in drinking water, the IDPH collected two drinking water samples for Volatile Organic Compounds (VOCs) analysis. IDPH notified Winnebago County that the two samples had confirmed hits of VOCs in the drinking water.

On August 2, 2011, the WCHD and IDPH held an informational meeting for residents in this area to gather information on the contamination and to sign up for additional testing.

On August 4, 2011, 20 homes were selected for additional testing from feedback from the meeting questionnaires completed by residents.

On August 19, 2011, the IDPH sent sample results to the 20 residents. Based on these results, the scope of the contamination has been limited to the AOC including homes on Soper and Alliance Avenues and Auburn Street.

The State and County health departments' primary role was to ensure that people who have private wells are aware of the risks associated with using the groundwater. The two agencies have been interpreting private well test results the past three months and explaining to well users any potential health implications. The Illinois EPA is investigating the source or sources of the groundwater contamination to determine whether the source or sources can be cleaned up or effectively stopped from contributing to groundwater contamination.

Illinois EPA started its investigation on October 24, 2011, with plans to install up to nine temporary monitor wells in the vicinity of the AOC, sample existing monitoring wells in the area, and sample additional residential wells.

2. Potential for continued State/local response

Illinois EPA requested assistance from the EPA to provide an alternative drinking water supply for residential homes that have exceeded or may potentially exceed the MCL for benzene.

III. THREATS TO PUBLIC HEALTH, WELFARE, OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES

The conditions at the SAG Site present an imminent and substantial threat to public health, welfare, and the environment and meet the criteria for a removal action provided for in 40 C.F.R. § 300.415(b)(2). These criteria include, but are not limited to, the following:

a. Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants;

The presence of four impacted drinking water wells within a plume of VOC- contaminated groundwater documents a potential exposure to human populations from hazardous substances. Benzene has been detected in four drinking water wells, as high as 1,300 parts per billion (ppb). The EPA's Removal Action Level (RAL) for benzene is 39 µg/L and MCL 5 ppb. The RALs establish the criteria for determination of an emergency removal action.

Benzene is a Class A human carcinogen. Exposure to benzene at the levels found in the private wells over long periods of time may lead to disorders of the blood and bone marrow system, such as anemia, and may increase the lifetime risk of cancer. Benzene in drinking water poses a potential exposure threat to humans via inhalation of contaminated water as well as inhalation of vapors during showering and washing dishes.

b. Actual or potential contamination of drinking water supplies or sensitive ecosystems.

The Winnebago and Illinois health departments have documented four active drinking water wells contaminated with levels of benzene in excess of the MCL of 5 ppb. In addition, two residential water wells have been documented with benzene contamination below the MCL. Detections above safe drinking water standards have become more frequent and appear to be increasing.

c. The availability of other appropriate federal or state response mechanisms to respond to the release.

Due to VOC contamination in the SAG Site wells, the Illinois EPA requested assistance from the EPA's Emergency Response Branch on October 13, 2011, to evaluate site conditions for a removal action.

IV. ENDANGERMENT DETERMINATION

Given the Site conditions, the nature of the confirmed hazardous substances, and the potential exposure pathways described in Sections II and III above, actual or threatened releases of hazardous substances from this Site, if not addressed by implementing the response actions selected in this Action Memorandum, present an imminent and substantial endangerment to public health, or welfare, or the environment.

V. PROPOSED ACTIONS

A. Proposed Actions

1. Proposed action description

The response actions described in this memorandum directly address actual or potential releases of hazardous substances on Site, which may pose an imminent and substantial endangerment to public health, or welfare, or the environment. Removal activities on Site will include:

1. Use accumulated analytical results to identify residents using contaminated groundwater and provide temporary bottled water based on IDPH recommendations.
2. Use accumulated analytical results to identify residences with contaminated groundwater and/or in the path of the benzene plume.
3. Connect residential properties within the Site boundary to the Rockford public water system. The property owner will pay monthly water bills following installation.
4. Complete residential well abandonment at all residents that accept connection to the Rockford public water system.
5. Restore residential property after construction work has been completed.
6. Conduct Vapor Intrusion sampling as necessary to determine if inhalation of benzene, or other VOC compounds via intrusion through basements and crawl spaces is evident, and take appropriate actions at those residences to mitigate the vapor intrusion threat.

The removal actions will be conducted in a manner not inconsistent with the NCP. The OSCs will initiate planning for provision of post-removal Site control consistent with the provisions of NCP § 300.415(l). The threats posed by uncontrolled substances considered hazardous meet the criteria listed in NCP § 300.415(b)(2), and the response actions proposed herein are consistent with any long-term remedial actions which may be required. Elimination of all threats presented by hazardous substances, pollutants, or contaminants in the residences is, however, expected to minimize the need for post-removal Site control.

Off-Site Rule

All hazardous substances, pollutants, or contaminants removed off-site pursuant to this removal action for treatment, storage, and disposal shall be treated, stored, or disposed of at a facility in compliance, as determined by EPA, with the EPA Off-Site Rule, 40 C.F.R. § 300.440.

7. Contribution to remedial performance

The proposed action will not impede future actions based on available information. At this time it is not known if long-term remedial actions will be needed for the Site. Although the Site is not on the NPL, the OSC will coordinate with Illinois EPA to address longer term groundwater contamination.

8. Engineering Evaluation/Cost Analysis (EE/CA)

Not Applicable

9. Applicable or relevant and appropriate requirements (ARAR)

All applicable, relevant, and appropriate requirements (ARARs) will be complied with to the extent practicable. An e-mail was sent to Bruce Everetts of the Illinois EPA on November 15, 2011, requesting that Illinois EPA identify State ARARs.

10. Project Schedule

These activities will require an estimated 40 on-site working days to complete.

B. Estimated Costs

The detailed cleanup contractor cost is presented in Attachment I and the Independent Government Cost Estimate is presented in Attachment 1. Estimated project costs are summarized below:

REMOVAL PROJECT CEILING ESTIMATE

EXTRAMURAL COSTS:

REMOVAL ACTION PROJECT CEILING ESTIMATE	
<u>Extramural Costs:</u>	
<u>Regional Removal Allowance Costs:</u>	
Total Cleanup Contractor Costs	\$ 166,740
(This cost category includes estimates for ERRS, subcontractors, Notices to Proceed, and Interagency Agreements with Other Federal Agencies. Includes a 20% contingency)	
<u>Other Extramural Costs Not Funded from the Regional Allowance:</u>	
Total START, including multiplier costs	\$ 20,000
Total Decontamination, Analytical & Tech. Services (DATS)	\$ 0
Total CLP	\$ 0
Subtotal	\$ 20,000

Subtotal Extramural Costs	\$ 186,740
Extramural Costs Contingency (20% of Subtotal, Extramural Costs rounded to nearest thousand)	<u>\$ 37,348</u>
TOTAL REMOVAL ACTION PROJECT CEILING	\$ 224,088

The response actions described in this memorandum directly address the actual or threatened release at the SAG Site of a hazardous substance, or of a pollutant, or of a contaminant which may pose an imminent and substantial endangerment to public health or welfare or to the environment. These response actions do not impose a burden on affected property disproportionate to the extent to which that property contributes to the conditions being addressed.

VI. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN

Given the Site conditions, the nature of the hazardous substances and pollutants or contaminants documented on Site, and the potential exposure pathways to nearby populations described in Sections II, III and IV above, actual or threatened release of hazardous substances and pollutants or contaminants from the Site, failing to take or delaying action may increase public health risks through prolonged exposure to ground water contamination.

VII. OUTSTANDING POLICY ISSUES

None.

VIII. ENFORCEMENT

For administrative purposes, information concerning the enforcement strategy for this Site is contained in the Enforcement Confidential Addendum.

The total EPA costs for this removal action based on full-cost accounting practices that will be eligible for cost recovery are estimated to be \$416,483.¹

$$(\$224,088 + \$31,800) + (62.76\% \times \$255,888) = \$416,483$$

¹Direct Costs include direct extramural costs and direct intramural costs. Indirect costs are calculated based on an estimated indirect cost rate expressed as a percentage of site-specific direct costs, consistent with the full cost accounting methodology effective October 2, 2000. These estimates do not include pre-judgment interest, do not take into account other enforcement costs, including Department of Justice costs, and may be adjusted during the course of a removal action. The estimates are for illustrative purposes only and their use is not intended to create any rights for responsible parties. Neither the lack of a total cost estimate nor deviation of actual total costs from this estimate will affect the United States' right to cost recovery.

IX. RECOMMENDATION

This decision document represents the selected removal action for the Soper Avenue Groundwater Site developed in accordance with CERCLA, as amended, and is not inconsistent with the NCP. This decision is based upon information now presented in the Administrative Record for the Site. Conditions at the Site meet the NCP Section 300.415(b)(2) criteria for a removal and I recommend your approval of the proposed removal action.

The total removal action project ceiling, if approved, will be \$224,088. Of this, an estimated \$204,088 may be used for cleanup contractor costs. You may indicate your decision by signing below:

APPROVE: Richard C. Kelly DATE: 1-10-12
Director, Superfund Division

DISAPPROVE: _____ DATE: _____
Director, Superfund Division

Enforcement Addendum

Attachments

1. Detailed Cleanup Contractor Cost Estimate
2. Administrative Record Index
3. Independent Government Cost Estimate
4. Site Location Map
5. EJ Analysis

cc: S. Fielding, U.S. EPA, 5203-G, fielding.sherry@epa.gov
V. Darby, U.S. DOI, w/o **Enf. Addendum**, valencia_darby@ios.doi.gov
Bruce Everetts, IEPA w/o **Enf. Addendum**, bruce.everetts@illinois.gov

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ENFORCEMENT CONFIDENTIAL ADDENDUM

**SOPER AVENUE GROUNDWATER SITE
ROCKFORD, WINNEBAGO COUNTY, ILLINOIS**

NOVEMBER 2011

(REDACTED 1 PAGES)

**ENFORCEMENT CONFIDENTIAL
NOT SUBJECT TO DISCOVERY**

ATTACHMENT 1

DETAILED CLEANUP CONTRACTOR ESTIMATE SOPER AVE. GROUNDWATER SITE ROCKFORD, WINNEBAGO COUNTY, ILLINOIS NOVEMBER 2011

The estimated cleanup contractor costs necessary to complete the removal action at the Soper Ave. Groundwater Site are as follows:

Personnel & Equipment	\$ 30,200
Materials & Misc	\$ 108,750
Transportation and Disposal	\$ <u>0</u>
TOTAL	\$ 138,950

ATTACHMENT 2

ADMINISTRATIVE RECORD INDEX SOPER AVE. GROUNDWATER SITE ROCKFORD, WINNEBAGO COUNTY, ILLINOIS NOVEMBER 2011

<u>DATE</u>	<u>AUTHOR</u>	<u>RECIPIENT</u>	<u>TITLE/DESCRIPTION</u>	<u>PAGES</u>
10/13/11	Bruce Everetts IEPA	Mike Ribory USEPA	IEPA Referral	2
10/2011	IEPA	USEPA	Fact Sheet	4
00/00/00	IEPA	USEPA	Site Investigation Pending	
00/00/00	Brad Benning USEPA	Richard Karl USEPA	Action Memo Pending	

ATTACHMENT 3

INDEPENDENT GOVERNMENT COST ESTIMATE

**SOPER AVENUE GROUNDWATER SITE
ROCKFORD, WINNEBAGO COUNTY, ILLINOIS**

NOVEMBER 2011

(REDACTED 1 PAGE)

NOT RELEVANT TO THE SELECTION OF THE REMOVAL ACTION

ATTACHMENT 4

SITE LOCATION MAP SOPER AVE. GROUNDWATER SITE



ATTACHMENT 5

EJ ANALYSIS SOPER AVE. GROUNDWATER SITE

